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SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application Number

EP 95 90 5366

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
	No further relevant documents disclosed -----		G07F7/10

TECHNICAL FIELDS SEARCHED (Int.Cl.6)

G07F
G06F

The supplementary search report has been drawn up for the claims attached hereto.

Place of search	Date of completion of the search	Examiner
THE HAGUE	29 April 1998	Pottiez, M

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
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AMENDED CLAIMS
[received by the International Bureau on 3 July 1995 (03.07.95);
original claims 1-22 replaced by amended claims 1-42 (13 pages)]

1   1. A network sales system providing for real-time
2   authorization of purchase transactions, comprising:
3   a plurality of buyer computers; and
4   a plurality of merchant computers;
5   said plurality of buyer computers and said
6   plurality of merchant computers being interconnected by a
7   public packet switched communications network;
8   at least one of said plurality of merchant
9   computers being programmed to store digital
10   advertisements in a database;
11   each one of said buyer computers being programmed
12   to receive a user inquiry and, in response to said user
13   inquiry, to select at least one of said merchant
14   computers and to transmit a network request thereto;
15   at least one of said merchant computers being
16   programmed to cause one of said digital advertisements to
17   be communicated to said one of said buyer computers over
18   said public packet switched communications network in
19   response to said network request from said buyer
20   computer;
21   said one of said buyer computers being programmed
22   to display said one of said digital advertisements, and,
23   in response to a user request, to transmit to at least
24   one of said merchant computers a purchase message and to
25   cause a payment request, comprising a payment amount, to
26   be transmitted into a payment system in order to initiate
27   authorization of purchase of a product having real
28   monetary value advertised in said one of said digital
29   advertisements and in order to initiate recordation of
30   said payment request and an authorization in a settlement
31   database;
32   - at least one of said merchant computers being
33   programmed to receive said purchase message, and to cause
34   said product to be sent to said user conditioned on said

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35 purchase transaction having been authorized in real time
36 by a financial authorization network external to said
37 network sales system, based on an external credit card
38 account or an external demand deposit account having
39 sufficient credit or funds of real monetary value
40 available to said principal making said payment, and
41 conditioned on at least one message transmitted over said
42 public packet switched communications network in
43 connection with purchase of said product not being a
44 replay of a message previously transmitted over said
45 public packet switched communications network.

1   2. A network sales system in accordance with
2 claim 1, wherein said payment system is configured to
3 perform a replay check of said payment request to
4 determine whether an identical payment request was
5 previously transmitted to said payment system.

1   3. A network sales system in accordance with
2 claim 1, wherein said payment system verifies an
3 authenticator in order to verify said identity of said
4 principal making payment.

1   4. A network sales system in accordance with
2 claim 3, wherein said payment system, upon verification
3 of said authenticator, sends an authorization request to
4 said financial authorization network and receives
5 authorization from said financial authorization network.

1   5. A network sales system in accordance with
2 claim 1, wherein at least one of said merchant computers
3 is programmed to communicate a missing payment
4 information request message to said buyer computer to
5 obtain missing payment information, said buyer computer
6 is programmed to query a user for said missing payment

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7 information and to transmit said missing payment

8 information to at least one of said merchant computers.

1   6.   A network sales system in accordance with

2 claim 1, wherein said payment request comprises a payment

3 order that describes the identity of a sender, a payment

4 amount, a beneficiary, and a nonce.

1   7.   A network sales system in accordance with

2 claim 1, wherein said payment system is external to said

3 plurality of buyer computers and said plurality of

4 merchant computers.

1   8.   A network sales system in accordance with

2 claim 1, wherein said demand deposit account comprises a

3 debit card account.

1   9.   A network payment system for transferring

2 funds having real monetary value from a sender to a

3 beneficiary and providing for real-time authorization of

4 payment transactions by a financial authorization network

5 external to said network payment system, comprising:

6   a plurality of client computers; and

7   at least one payment computer;

8   said client computers and said payment computer

9 being interconnected by a public packet switched

10 communications network;

11   each one of said client computers being programmed

12 to construct a payment request specifying a payment

13 amount to be transferred from a sender to a beneficiary,

14 and to cause said payment request to be transmitted to

15 said payment computer;

16   : said payment computer being programmed to cause a

17 message to be transmitted into said financial

18 authorization network external to said network payment

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19 system in order to verify that said sender has adequate
20 funds or credit having real monetary value, to receive an
21 authorization from said financial authorization network
22 in response to said message, to transmit an authorization
23 message to said client computer, to cause said payment
24 request and authorization to be recorded in a settlement
25 database, and to cause funds having real monetary value
26 to be transferred from said sender to said beneficiary
27 conditioned on said payment request having been
28 authorized in real time by said financial authorization
29 network based on an external credit card account or an
30 external demand deposit account having sufficient credit
31 or funds of real monetary value available to said sender,
32 and conditioned on at least one message transmitted over
33 said public packet switched communications network in
34 connection with transfer of said funds not being a replay
35 of a message previously transmitted over said public
36 packet switched communications network.

1   10. A network payment system in accordance with
2 claim 9, wherein said payment computer is programmed to
3 perform a replay check of said payment request to
4 determine whether an identical payment request was
5 previously transmitted to said payment computer.

1   11. A network payment system in accordance with
2 claim 9, wherein said payment request comprises at least
3 a partial delivery address, and wherein said payment
4 computer is programmed to cause said delivery address to
5 be checked against a database of allowed delivery
6 addresses for said sender.

1   12. A network payment system in accordance with
2 claim 9, wherein said payment computer is programmed to
3 cause at least partial allowed delivery addresses for

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4 said sender to be determined, and wherein said
5 authorization message comprises said at least partial
6 allowed delivery addresses.

1   13. A network payment system in accordance with
2 claim 9, wherein said authorization message comprises an
3 authenticator.

1   14. A network payment system in accordance with
2 claim 9, wherein said client computer is programmed to
3 cause an authenticator that verifies to said payment
4 computer the identity of said sender to be transmitted to
5 said payment computer, and wherein said payment computer
6 is programmed to examine said authenticator to verify
7 said identity of said sender.

1   15. A network payment system in accordance with
2 claim 14, wherein said client computer is programmed to
3 generate a next expected transaction identifier for said
4 sender and to use it to create said authenticator, and
5 wherein said payment computer is programmed to generate
6 said next expected transaction identifier for said sender
7 and to verify that said authenticator was created using
8 said next expected transaction identifier.

1   16. A network payment system in accordance with
2 claim 14, wherein said client computer is programmed to
3 generate said authenticator using an external device, and
4 wherein said payment computer is programmed to verify
5 that said authenticator was created using said external
6 device.

1   :17. A network payment system in accordance with
2 claim 14, wherein said payment request comprises a
3 network address of said client computer, and wherein said

4   payment computer is programmed to verify that said
5   payment request was constructed at said network address.

1   18.   A network payment system in accordance with
2   claim 13, wherein said payment request comprises a
3   network address of said client computer, and wherein said
4   payment computer is programmed to check said network
5   address against a database of allowed client addresses
6   for said sender.

1   19.   A network payment system in accordance with
2   claim 9, wherein said payment computer is programmed to
3   determine whether real-time authorization is necessary
4   and to cause said message to be transmitted into said
5   financial authorization network to verify that said
6   sender has adequate funds or credit only if said payment
7   computer has determined that real-time authorization is
8   necessary.

1   20.   A network payment system in accordance with
2   claim 9, wherein said demand deposit account comprises a
3   debit card account.

1   21.   A method of effecting sales over a network
2   sales system comprising a plurality of buyer computers
3   and a plurality of merchant computers interconnected by a
4   public packet switched communications network, said
5   method providing for real-time authorization of purchase
6   transactions and comprising the steps of:
7   storing digital advertisements in a database;
8   receiving a user inquiry at one of said buyer
9   computers and, in response to said user inquiry,
10   selecting one of said merchant computers, and
11   transmitting a network request from said one of said
12   buyer computers thereto;

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13   communicating one of said digital advertisements
14   from one of said merchant computers to said one of said
15   buyer computers over said public packet switched
16   communications network in response to said network
17   request from said buyer computer;
18   displaying said one of said digital advertisements
19   at said one of said buyer computers, and, in response to
20   a user request, transmitting from said one of said buyer
21   computers to one of said merchant computers a purchase
22   message, and causing a payment request, comprising a
23   payment amount, to be transmitted into a payment system
24   in order to initiate authorization of purchase of a
25   product having real monetary value advertised in said one
26   of said digital advertisements and in order to initiate
27   recordation of said payment request and an authorization
28   in a settlement database; and
29   receiving said purchase message at one of said
30   merchant computers, and causing said product to be sent
31   to said user conditioned on said purchase transaction
32   having been authorized in real time by a financial
33   authorization network external to said network sales
34   system, based on an external credit card account or an
35   external demand deposit account having sufficient credit
36   or funds of real monetary value available to said
37   principal making said payment, and conditioned on at
38   least one message transmitted over said public packet
39   switched communications network in connection with said
40   purchase transaction not being a replay of a message
41   previously transmitted over said public packet switched
42   communications network.

1   22. A method in accordance with claim 21, further
2   comprising the step of performing a replay check, at said
3   payment system, of said payment request to determine

4   whether an identical payment request was previously
5   transmitted to said payment system.

1   23.   A method in accordance with claim 21, wherein
2   said method further comprises the steps of verifying, at
3   said payment computer, an authenticator in order to
4   verify said identity of said principal making payment.

1   24.   A method in accordance with claim 23, further
2   comprising the steps of, upon verification of said
3   authenticator, sending an authorization request from said
4   payment computer to said financial authorization network,
5   and receiving at said payment computer authorization from
6   said financial authorization network.

1   25.   A method in accordance with claim 21, further
2   comprising the steps of communicating a missing payment
3   information request message from one of said merchant
4   computers to said buyer computer to obtain missing
5   payment information, querying a user for said missing
6   payment information, and transmitting said missing
7   payment information from said buyer computer to one of
8   said merchant computers.

1   26.   A method in accordance with claim 21, wherein
2   said payment request comprises a payment order that
3   describes the identity of a sender, a payment amount, a
4   beneficiary, and a nonce.

1   27.   A method in accordance with claim 21, wherein
2   said payment system is external to said plurality of
3   buyer computers and said plurality of merchant computers.

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1   28. A method in accordance with claim 21, wherein
2   said demand deposit account comprises a debit card
3   account.

1   29. A method of transferring funds having real
2   monetary value from a sender to a beneficiary using a
3   network payment system comprising a plurality of client
4   computers and at least one payment computer
5   interconnected by a public packet switched communications
6   network, said method providing for real-time
7   authorization of purchase transactions by a financial
8   authorization network external to said network payment
9   system and comprising the steps of:
10   constructing a payment request at one of said
11   client computers specifying a payment amount to be
12   transferred from a sender to a beneficiary, and causing
13   said payment request to be transmitted to said payment
14   computer; and
15   causing a message to be transmitted into said
16   financial authorization network external to said network
17   payment system in order to verify that said sender has
18   adequate funds or credit having real monetary value,
19   receiving, at said payment computer, an authorization
20   from said financial authorization system in response to
21   said message, transmitting an authorization message from
22   said payment computer to said client computer, causing
23   said payment request and authorization to be recorded in
24   a settlement database, and causing funds having real
25   monetary value to be transferred from said sender to said
26   beneficiary conditioned on said payment request having
27   been authorized in real time by said financial
28   authorization system based on an external credit card
29   account or an external demand deposit account having
30   sufficient credit or funds of real monetary value
31   available to said sender, and conditioned on at least one

32 message transmitted over said public packet switched

33 communications network in connection with transfer of.

34 said funds not being a replay of a message previously

35 transmitted over said public packet switched

36 communications network.

1   30. A method in accordance with claim 29, further

2 comprising the step of performing a replay check, at said

3 payment computer, of said payment request to determine

4 whether an identical payment request was previously

5 transmitted to said payment computer.

1   31. A method in accordance with claim 29, wherein

2 said payment request comprises at least a partial

3 delivery address, and wherein said method further

4 comprises the step of checking said delivery address

5 against a database of allowed delivery addresses for said

6 sender.

1   32. A method in accordance with claim 29, further

2 comprising the steps of determining at least partial

3 allowed delivery addresses for said sender, and wherein

4 said authorization message comprises said at least

5 partial allowed delivery addresses.

1   33. A method in accordance with claim 29, wherein

2 said authorization message comprises an authenticator.

1   34. A method in accordance with claim 29, wherein

2 further comprising the steps of causing an authenticator

3 that verifies to said payment computer the identity of

4 said sender to be transmitted to said payment computer,

5 and examining said authenticator at said payment computer

6 to verify said identity of said sender.

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1   35.   A method in accordance with claim 34, further
2 comprising the steps of generating, at said client
3 computer, a next expected transaction identifier for said
4 sender and using it to create said authenticator, and
5 generating, at said payment computer said next expected
6 transaction identifier for said sender, and verifying, at
7 said payment computer, that said authenticator was
8 created using said next expected transaction identifier.

1   36.   A method in accordance with claim 34, further
2 comprising the steps of generating said authenticator at
3 said client computer using an external device, and
4 verifying, at said payment computer that said
5 authenticator was created using said external device.

1   37.   A method in accordance with claim 34, wherein
2 said payment request comprises a network address of said
3 client computer, and wherein said method further
4 comprises verifying, at said payment computer, that said
5 payment request was constructed at said network address.

1   38.   A method in accordance with claim 29, wherein
2 said payment request comprises a network address of said
3 client computer, and wherein said method further
4 comprises the step of checking, at said payment computer,
5 said network address against a database of allowed client
6 addresses for said sender.

1   39.   A method in accordance with claim 29, further
2 comprising the steps of determining, at said payment
3 computer, whether real-time authorization is necessary,
4 and causing said message to be transmitted into said
5 financial authorization network to verify that said
6 sender has adequate funds or credit only if said payment

7   computer has determined that real-time authorization is
8   necessary.

1   40.   A method in accordance with claim 29, wherein
2   said demand deposit account comprises a debit card
3   account.

1   41.   A network sales system providing for real-
2   time authorization of purchase transactions, comprising:
3   a plurality of buyer computers; and
4   a plurality of merchant computers;
5   said plurality of buyer computers and said
6   plurality of merchant computers being interconnected by a
7   public packet switched communications network;
8   each of said buyer computers being programmed to
9   transmit to at least one of said merchant computers, in
10 response to a user request, a purchase message and to
11 cause a payment request, comprising a payment amount, to
12 be transmitted into a payment system in order to initiate
13 authorization of purchase of a product having real
14 monetary value and in order to initiate recordation of
15 said payment request and an authorization in a settlement
16 database;
17   at least one of said merchant computers being
18 programmed to receive said purchase message, and to cause
19 said product to be sent to said user conditioned on said
20 purchase transaction having been authorized in real time
21 by a financial authorization network external to said
22 network sales system, based on an external credit card
23 account or an external demand deposit account having
24 sufficient credit or funds of real monetary value
25 available to a principal making said payment, and
26 conditioned on at least one message transmitted over said
27 public packet switched communications network in
28 connection with purchase of said product not being a

29 replay of a message previously transmitted over said
30 public packet switched communications network.

1   42.   A method of effecting sales over a network
2 sales system comprising a plurality of buyer computers
3 and a plurality of merchant computers interconnected by a
4 public packet switched communications network, said
5 method providing for real-time authorization of purchase
6 transactions and comprising the steps of:
7   in response to a user request, transmitting from
8 one of said buyer computers to one of said merchant
9 computers a purchase message, and causing a payment
10 request, comprising a payment amount, to be transmitted
11 into a payment system in order to initiate authorization
12 of purchase of a product having real monetary value and
13 in order to initiate recordation of said payment request
14 and an authorization in a settlement database; and
15   receiving said purchase message at one of said
16 merchant computers, and causing said product to be sent
17 to said user conditioned on said purchase transaction
18 having been authorized in real time by a financial
19 authorization network external to said network sales
20 system, based on an external credit card account or an
21 external demand deposit account having sufficient credit
22 or funds of real monetary value available to a principal
23 making said payment, and conditioned on at least one
24 message transmitted over said public packet switched
25 communications network in connection with said purchase
26 transaction not being a replay of a message previously
27 transmitted over said public packet switched
28 communications network.

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